

An excerpt from: Tharp, R. G., P. Estrada, S. S. Dalton, and L. A. Yamauchi, 2000. **Teaching Transformed. Achieving Excellence, Fairness, Inclusion, and Harmony.** Boulder, Colorado: Westview Press, 30-31.

There is a clear consensus among researchers that all students, perhaps at-risk students especially, require instruction that is cognitively challenging; that is, that requires thinking and analysis, not only rote, repetitive, detail-level drills. This does not mean ignoring phonics rules, or not memorizing the multiplication tables, but it does mean going beyond that level of basic skills into the exploration of the deepest possible reaches of analysis and problem solving. When all students are expected to meet high academic standards and to devote serious effort to academic pursuits; when they learn how to engage in sustained, disciplined, critical thought on topics relevant beyond school; then there will be achievement gains for all students, including the disadvantaged (Lee, Smith, and Croninger 1995; Waxman, Padron, and Knight 1991).

Working with a cognitively challenging curriculum requires appropriate leveling of tasks, so that students are stretched to grow within their “zones of proximal development” (Vygotsky 1978), where they can reach higher performance with assistance from teachers and collaborating peers. Teaching complex thinking certainly does not mean drill-and-kill exercises; neither does it mean overwhelming challenges that discourage effort. Getting the correct balance involves striking the “productive tension” between support and challenge, between the pleasures of mastery and of moving beyond present accomplishments (Csikszentmihalyi, Rathunde, and Whalen 1993; Langer 1995; Applebee 1996). Designing activities that are more challenging will bring a marked advance in the excitement and gratification of the classroom day.

It is much easier to teach to routine, minimum standards, because challenging students toward cognitive growth requires that teachers challenge, assess, and assist themselves right along with the learners. The perceived cost of the effort to teachers in preparing cognitively challenging learning activities too often deters it. Yet this is the level of activity that can keep the profession (and individual teachers) vital. In addition, at-risk students, particularly those of limited standard English proficiency, are often “forgiven” any academic challenges on the assumption that they are of limited ability, or they are “forgiven” any genuine assessment of progress because the assessment devices don’t fit. Thus, both standards and feedback are weakened, with the predictable result that achievement is handicapped. Although such policies may often be the result of benign motives, the effect is to deny many diverse students the basic requirements of progress: high academic standards and meaningful assessment that allows feedback and responsive assistance (Fradd and Larrinaga McGee 1994; Waxman, Padron, and Knight 1991).

Challenging and stimulating cognitive growth means encouraging students to review and question their own and others’ beliefs and rationales. Activities for problem solving through dialogue provide an organizing structure for students to construct new understandings. Dramatic problems with real-life meaning can help students at any level to evaluate, revise, and reorganize their conceptual structures (Bruer 1993). The object of complex thinking is most often not to conclude with a correct answer, but to expand discussion and promote alternative solutions or perspectives (Langer 1995).